

SPECIAL SPECIFICATION

SECTION 07435S

COMPOSITE METAL WALL PANELS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Preformed composite metal panel system for walls and soffits, with insulation, liners, related flashings, and accessory components.

1.02 ENVIRONMENTAL OBJECTIVES:

- A. As described in section 01805 "Environmental Objectives", the owner has determined that this project must be rated by LEED™ Version 2.0 green building rating system, which was issued in March 2000 by the U.S. Green Building Council, 1015 18th Street, NW, Suite 805, Washington, DC 20036. Phone: 202/ 82-USGBC (828-7422) Fax: 202/ 828-5110.
- B. The design has been pre-scored by the Design Team, using the LEED™ rating system, in anticipation of submitting the buildings for certification as a "green" building. The Sustainable Design Report, issued with the Contract Documents, represents the results of the sustainable design efforts for the MESA Complex and a pre-score of the LEED™ rating. LEED™ is a performance-based rating system, which gives points for those sustainable design elements incorporated into the final design.
- C. While these goals and implementation strategies are incorporated within the Contract Documents, suggestions and input from the contractor for implementing these goals are encouraged. A team approach is encouraged.
- D. Manufacturer/ Fabricator to supply documentation of level of compliance or non-compliance with the following requirements before consideration as an "Acceptable Manufacturer".
 - 1. The Design Team has determined that the following be mandatory requirements:
 - a. Comply with the requirements of section 01505S "Construction Waste Management"

2. The Design Team has determined that the following be a highly desirable objective:

- a. The product(s) supplied is manufactured/fabricated within a radius of 500 miles from the project site and/or the manufactured/fabricated product(s) are extracted, harvested, or recovered within 500 miles of the project site.**
- b. The product(s) supplied is to have a minimum weighted average of 20% post consumer recycled content material, OR, a minimum weighted average of 40% post-industrial recycled content material.**

E. Products that conform to the Environmental Objectives yet do not fully meet other requirements of this section may still be considered at the sole discretion of the Owner and Architect.

1.03 REFERENCES

- A. ASTM A 153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- B. ASTM A 167 - Stainless and Heat-Resisting Chromium- Nickel Steel Plate, Sheet, and Strip.
- C. ASTM A 653 - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- D. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.
- E. ASTM E 84 - Surface Burning Characteristics of Building Materials.
- F. FS HH-I-521 - Insulation Blankets, Thermal (Mineral Fiber, for Ambient Temperatures).

1.04 SYSTEM DESCRIPTION

- A. Preformed and prefinished composite metal panel system of horizontal and vertical profile; site assembled; with sub-girt framing/anchorage assembly.

1.05 PERFORMANCE REQUIREMENTS

- A. Preformed metal panel system to withstand code imposed design loads. Maximum allowable deflection of span: 1/180.
- B. System to accommodate movement of components without buckling, failure of joint seals, undue stress on fasteners, or other detrimental effects, when subject to seasonal temperature ranges.
- C. System to accommodate tolerances of structure.

- D. Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.

1.06 SUBMITTALS

Environmental Objectives Documentation: signed by the manufactures/fabricators stating level of compliance for the requirements and objectives in Environmental Objectives in section

- A. Indicate dimensions, panel layout, construction details, method of anchorage, method and sequence of installation.
- B. Submit manufacturer's standard color samples for selection.
- C. Submit manufacturer's installation instructions.

PART 2 - PRODUCTS

2.01 SHEET MATERIALS

- A. Basis of Design: ALUCOBOND aluminum composite material as manufactured by Alusuisse Composites, Inc.
- B. Items of the same function and performance, which have received prior approval from the Architect, shall be allowed for this product. Approval shall be based on documentation submitted showing the adequacy of the material.

2.02 MATERIALS

- A. Sealants and Gaskets: Manufacturer's standard type suitable for use with installation of metal panel system; non-staining; non-skinning, non-shrinking, and non-sagging; ultra-violet and ozone resistant for exterior applications; color as selected from manufacturers standards.
- B. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers galvanized in accordance with ASTM A 153 with 2.00 ounces per square foot coating; finish to match panel finish when exposed.
- C. Powder Actuated Fasteners: Galvanized in accordance with ASTM A 153; with soft neoprene washers; caps of same color as exterior panel.
- D. Sub-girts: Steel, zinc- coated to 1.25 ounces per square foot coating in accordance with ASTM A 153; profile as indicated on drawings to accept composite building panel system for attachment to structural frame.
- E. Touch-up Paint: As recommended by panel manufacturer.

2.03 FABRICATION

- A. Exterior Panels: Minimum 3 mm thick, sheet stock; profile as indicated; interlocking edges filled with sealant.

- B. Internal and External Corners: Same material, thickness, and finish as metal panels; profile to suit system; shop cut and factory mitered to required angles. Mitered internal corners, back braced with to maintain continuity of profile.
- C. Expansion Joints: Same material and where exposed, finish as panels; manufacturer's standard brake formed infill type, of profile to suit system. Exposed fasteners same finish as panel system.
- D. Trim, Closure Pieces, Caps, Fascias, and Infills: Same material, thickness, and where exposed, of same finish as sheet stock; brake formed to required profiles.
- E. Anchorage and Support Members: Thickness as needed.
- F. Fabrication of component profiles on site not permitted.

2.04 FINISH

- A. Exposed Exterior Surfaces: Kynar type finish; color to match the scheduled colors.
- B. Schedule: AL-1 = "Champagn Metallic, A3000-DXLE," by Alcon Composites USA Inc., or approved equal; AL-2 = "Copper Metallic, 1-30-XL," by Alcon Composites USA Inc., or approved equal; see drawings for location.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install composite metal wall panel system on walls and soffits in accordance with manufacturer's instructions.
- B. Protect panel surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.
- C. Remove site cuttings from finish surfaces.
- D. Permanently fasten panel system to structural supports; align, level, and plumb, within specified tolerances.
- E. Locate panel joints over supports. End lap panels minimum 2 inches.
- F. Provide expansion joints where indicated.
- G. Use concealed fasteners unless otherwise approved by A/E.
- H. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.02 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16-inch.

B. Maximum Variation from Plane or Location Indicated on Drawings: 1/8-inch.

END OF SECTION